THE OFFICE OF REGULATORY STAFF

DIRECT TESTIMONY AND EXHIBITS OF

DOUGLAS H. CARLISLE, JR.

November 21, 2007



DOCKET NO. 2007-286-WS

Utilities Services of South Carolina, Inc.
Application Adjustment of Rates and Charges
and Modifications to Certain Terms and
Conditions for the Provision of Water and Sewer
Service

1		TESTIMONY OF DOUGLAS H. CARLISLE, JR.
2		FOR
3		THE OFFICE OF REGULATORY STAFF
4		DOCKET NO. 2007-286-W
5		IN RE: UTILITIES SERVICES OF SOUTH CAROLINA, INC.
6		
7	Q.	PLEASE STATE YOUR NAME, OCCUPATION AND BUSINESS
8	ADD	RESS.
9	A.	My name is Dr. Douglas H. Carlisle, Jr. I am the Economist at the South Carolina
10	Offic	e of Regulatory Staff ("ORS"). My business address is 1441 Main Street, Suite 300,
11	Colu	mbia, South Carolina 29201.
12	Q.	WOULD YOU PLEASE STATE YOUR EDUCATIONAL BACKGROUND
13	AND	YOUR BUSINESS EXPERIENCE?
14	A.	I received a Bachelor of Arts from Brown University, a Masters Degree in Public
15	Admi	inistration from the University of Virginia, and a Ph.D. in Government and
16	Interr	national Relations also from the University of Virginia. After graduate school, I
17	work	ed as an evaluator and evaluator-in-charge for 7½ years at the United States
18	Gove	rnment Accountability Office in Washington, D.C. Then I worked as a market
19	consu	ultant and instructor at Midlands Technical College in South Carolina. I began work
20	for th	e State at the State Reorganization Commission, which functioned as an audit
21	follov	w-up entity. I was next employed by the South Carolina House Education & Public
22	Work	s Committee. Before joining ORS, I worked five years for the State Chief
23	Econ	omist as an analyst in the Economist Research Section and as an adjunct to the

- 1 Board of Economist Advisors. I assumed by current position at ORS in March of 2005. I
- 2 have previously testified before this Commission concerning rate of return.

3 Q. WHAT IS THE MISSION OF THE OFFICE OF REGULATORY STAFF?

- 4 A. The mission of ORS is to represent the public interest in utility regulation by
- 5 balancing the concerns of the using and consuming public, the financial integrity of
- 6 public utilities, and the economic development of South Carolina.

7 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS

- **8 PROCEEDING?**
- 9 **A.** My purpose is to recommend the appropriate range for return on equity for
- 10 Utilities Services of South Carolina, Inc. ("USSC" or "the Company"). I shall present
- my conclusions and their bases for the appropriate return on equity for USSC.

12 Q. WHAT STANDARDS GOVERN RATE OF RETURN?

- 13 The Supreme Court of the United States set standards in two landmark decisions.
- 14 In the first case, involving a water company, the Court declared:

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A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties; but it has no constitutional right to profits such as are realized or anticipated in highly profitable or speculative ventures. The return should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise money for the proper discharge of its duties.¹

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¹ Bluefield Water Works & Improvement Company. v. Public Service Commission of West Virginia, 262 U.S. 679, 692-3 (1923).

- 1 This decision, the Bluefield decision was later reinforced by the decision in another case,
- 2 Federal Power Commission v. Hope Natural Gas Company:

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[T]he fixing of "just and reasonable" rates, involves a balancing of the investor and consumer interests.... From the investor or company point of view it is important that there be enough revenue not only for operating expenses but also for the capital cost of the business. These include service on the debt and dividends on the stock..... By that standard the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and attract capital.²

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Q. DOES USSC UTILITIES COMPANY HAVE TRADED COMMON

STOCK? 16

- 17 Α. No, its stock is entirely held by Utilities, Inc. of Northbrook, Illinois, which also
- 18 has no publicly traded stock. Utilities, Inc. was bought by AIG Highstar's sponsored
- 19 fund Hydro Star Holdings in 2006.

20 IF NEITHER THE COMPANY NOR ITS PARENT HAS TRADED 0.

21 STOCK, HOW DID YOU PERFORM YOUR ANALYSIS TO RECOMMEND A

22 **RETURN ON EQUITY?**

- 23 A. To develop a fair rate of return recommendation for USSC. I evaluated the return
- 24 requirements of investors on the common stock of two groups of publicly-held water
- 25 service companies. I then applied to these two groups two well-known and generally
- 26 accepted methods for determining a recommended return on equity, the Discounted Cash
- 27 Flow and Capital Asset Pricing methods.

² Federal Power Commission v. Hope Natural Gas Company, 320 U.S. 591, 603 (1944).

1 Q. WHY DID YOU EXAMINE DATA ON COMPANIES WITH TRADED

2 STOCK?

- 3 A. First, USSC has asked to be treated as a publicly traded company by applying for
- 4 a rate-based return-on-equity proceeding. Second, publicly traded water utilities are,
- 5 after all, in the same line of business as USSC and so share similar risks. Third, data is
- 6 far more readily available about publicly traded companies, so it is practical to use them.

7 Q. HOW DID YOU SELECT THESE COMPANIES AND GROUPS?

- 8 A. These companies are classified as "water utilities" by Value Line or by *Yahoo!*
- 9 Finance, engage in water distribution to customers and obtain most of their revenues
- from utility services. They naturally fall into two groups based upon whether their
- annual revenues exceed \$100 million. The Larger Company Group comprises Aqua
- 12 America, California Water Service Group, American States Water and SJW. I have
- excluded Southwest Water Company because most of its revenues come from
- unregulated activities. The Smaller Companies Group comprises Middlesex Water,
- 15 Artesian Resources, Connecticut Water Service, Pennichuck Corporation, York Water
- 16 Company and Birmingham Utilities, Inc. The average capital structure of the companies
- in the two groups is very close to 50% debt, 50% common equity. The characteristics of
- 18 the companies are shown on Schedule DHC-1.

19 Q. WHAT CAPITAL STRUCTURE DID YOU USE FOR YOUR ANALYSIS

20 **OF USSC?**

- A. I used the structure submitted by the company in its application: 59.83% debt and
- 22 40.17% equity. I used this structure for two reasons: USSC is closely integrated with its
- parent, so it would be difficult to determine an independently based capital structure.

- 1 Moreover, although it departs somewhat from the average of the companies in my proxy
- 2 groups, it approximates their average capital structure.
- 3 Q. WHY DO YOU NEED TO ESTIMATE A COST OF EQUITY AND
- 4 RECOMMEND A RETURN ON EQUITY AT ALL FOR USSC?
- 5 A. USSC is a monopoly and therefore does not face competition for its customers
- 6 from other water companies. If the Company were in a competitive industry, its return
- 7 on equity would be set by the competitive market for its goods and services. Since it is
- 8 not in a competitive industry, regulation must act as a surrogate for competition. It would
- 9 be unfair to allow the Company to set its own prices because it has no competition in its
- provision of an essential service and product, water.
- 11 Q. HOW DOES REGULATION ACT AS A SURROGATE?
- 12 A. Regulation seeks to establish prices that are fair and approximate the returns of
- similarly situated companies, which is consistent with the *Hope* and *Bluefield* criteria
- 14 cited earlier. There are several reasons why regulation can be an effective surrogate for
- 15 competition, but the most compelling is that public utilities face a competitive market in
- the arena of stock markets. The market for financing from common equity is
- 17 competitive, regardless of the situation of individual companies or their needs or desires.
- 18 This market provides an objective standard for evaluating the appropriate return on
- 19 equity.

1 Q. IF REGULATED COMPANIES ARE SIMILAR, THEN WOULD THAT

- 2 NOT MAKE REGULATION CIRCULAR BECAUSE EACH RATE CASE IN
- 3 EACH STATE REFERS TO DECISIONS IN ALL OTHER STATES?
- 4 A. No, it does not. Since regulated utilities face a competitive market in trying to
- 5 sell their equity, there is an independent evaluation of company performance by investors
- 6 which helps determine what return these companies will actually receive. Companies'
- 7 managements can affect how profitably their companies are run. Moreover, utility
- 8 regulation calculates appropriate returns from used and useful assets known as rate base,
- 9 so the precise characteristics of each company are recognized in each rate case
- 10 proceeding.

11 Q. IF COMPANIES ARE NOT ENTIRELY SIMILAR, IS IT NOT UNFAIR

- 12 TO TREAT THEM ALIKE?
- 13 A. No, for two reasons. First, companies like public utilities engaged in selling the
- same services and same goods, are bound to have some fundamental similarities. In fact,
- some of these shared characteristics form the basis for their regulation. Second, if
- investors had to choose between investing in one company, an alternative, or even among
- 17 a very few companies, it might be somewhat unfair to treat very different companies
- alike. Investors, however, have a much wider range of choices and may invest in several
- 19 companies at the same time. This choice has a great impact on investments in equity and
- their returns. By investing in more than one company, an investor may mix degrees of
- 21 risk and return. To the extent that USSC's risks are unique, investors could avoid those
- risks by investing in several companies with different levels of risk. To the extent that
- 23 USSC faces circumstances that are unique to a group of companies, using groups of

- comparable companies accommodates such variation and, if investors wish to lessen risks associated with such a group, they may invest in companies in other lines of business.
 - Q. WHAT FACTORS AFFECT INVESTORS' REQUIRED RETURN ON
- 4 **COMMON EQUITY?**

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- 5 Α. The process investors use, on a basic level, is quite simple. Investors have a 6 desire to earn a certain return on their investments. For every dollar they invest, they 7 expect to earn back that dollar plus some additional cents. Each investor differs from 8 every other, but the market averages their weighted investments as it responds to their 9 changing perceptions and preferences. The mathematical relationship between each 10 dollar invested and dollar-plus-cents-earned is a ratio. Every change in every factor 11 contributing to the return the investor hopes to receive takes the form of a ratio change. For example "1.11" represents 11¢ additional that each investor hopes to earn on an 12 13 initial investment of \$1.00.
 - Investors, however, know that their expectations may not be fulfilled. They seek investments with a reasonable chance of earning the return they seek. Each investor has a concept of what "reasonable" means and investors differ from each other. Free market forces measure investors' collective expectations of the odds that they will achieve their investment goal. Another term for the assessment of the chances that investors will earn their goal is "risk."
 - One can think of investors' preferences mathematically: an earnings-to-investment ratio times a percentage risk or divided by a ratio expressing risk. For example, an investor might want to earn \$1.11 for every \$1.00 invested, a 1.11 ratio, but realize that there was only a 90%, or .9 or 9/10 chance of doing so. \$1.11 times .9 equals

- just under \$1.00. From the investor's perspective, the return is likely to be near zero the invested \$1.00 is likely to be returned with no gain. As a consequence, every investor
- 3 seeks to earn enough to be compensated for the risk undertaken.
- 4 This common-sense approach to returns and risks masks a very simple but very 5 powerful point about factors affecting investment. Investors, through their own analysis 6 and perhaps through the analysis of investment advisors, take into consideration all forms 7 of risk that affect the odds they will earn their target returns. Thus, there is no need to 8 partition risk into various components, unless there is a market imperfection. For 9 example, if a company has a high "business risk" such that it may face a decline in 10 earnings, then investors, not being foolish, are more likely not to invest in the company or 11 to expect it to produce lower earnings, bringing about a decline in the price of its stock, 12 which, if the dividend remains constant, raises the dividend yield. The business risk is 13 incorporated into the market. Bond rates measure the risk of bankruptcy, an extreme 14 form of risk, but the market still takes that into account. There are, however, different 15 ways to measure market-driven investment risk and I have applied two well-known and 16 generally accepted methods for determining a recommended return on equity, the 17 Discounted Cash Flow and Capital Asset Pricing methods.

18 Q. HOW DOES THE DISCOUNTED CASH FLOW (DCF) MODEL

REFLECT INVESTORS' EXPECTATIONS?

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A. Companies, from one perspective, resemble cash-generating and –consuming machines that produce extra cash that can improve the company or reward owners, after debts have been repaid. Under the DCF Model, someone who buys a share of a company pays a price per share that reflects expectations of all future cash rewards in the form of

- 1 dividends, discounted to their present value. The Model assumes that the earnings not
- 2 paid out in the form of dividends enhance the future value of the stock in the form of
- 3 higher future earnings and dividends. The current return on a stock reflects expectations
- 4 of dividends that will be paid out periodically in the future and therefore reflects the
- 5 market's assessment of risk and reward, which is the cost of common equity. In other
- 6 words, the discounted return on a stock indicates the cost of common equity.
- 7 Mathematically, the DCF Model may be represented by the following formula,
- 8 under the assumption of long-term constant growth:

$$r = DIV_1/P_0 + g,$$

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- where r is the expected rate of return (sometimes shown as "k"), DIV_1/P_0 is the dividend
- 13 yield, and g is the expected rate of growth in dividends. This formula was popularized by
- 14 Myron J. Gordon and is sometimes called the "Gordon formula."
- Stocks' current dividend yields appear in several sources of financial data and
- present little problem for measurement. Growth, the "g" factor, is more complicated.
- Nonetheless, there are ways to minimize problems with its estimation. I have employed
- multiple approaches that use historical data and analysts' predictions, since history and
- analysts' forecasts are the two things every investor or analyst is likely to know.

Q. HOW DID YOU DETERMINE g, THE GROWTH RATE COMPONENT?

- 21 A. I calculated historical growth rates in sales, earnings per share (EPS), dividends
- per share (DPS), and Book Value per Share (BVPS) for my proxy group. I obtained
- 23 historical data from Value Line for those companies covered by that service and used

- 1 Morningstar (another widely used service comparable to Value Line) and filings with the
- 2 Securities Exchange Commission to supplement the data. In addition, I used EPS
- 3 forecasts by Value Line and Morningstar.

4 Q. IF ESTIMATING GROWTH IS A SPECIAL PROBLEM, DOES THE

GROWTH OF DIVIDEND YIELD ALSO PRESENT A PROBLEM?

- 6 A. Yes it does, but there is a good approximation that satisfactory resolves the
- 7 problem. Since dividends are expected to grow over the long term, their growth is part of
- 8 the yearly corporate financial cycle. Dividends are announced each quarter. The
- 9 dividend yield for an entire year reflects increases that have taken place during that year
- or twelve-month period. The major problem for estimation arises because different
- companies have different schedules for announcing dividends, sometimes different
- dividends for different quarters when there is otherwise no change in annual dividend
- amounts, and may not increase their payments steadily from year to year.
- One method of accounting for future dividend growth is to multiply the current
- annualized dividend amount by the growth factor plus one (viz., " D_0 times 1 + g"). Since
- the DCF Model posits that growth is constant and dividend yields will reflect the cost of
- capital, applying the growth factor to dividends makes sense and is consistent with the
- basic DCF formula. The problem with this solution is that taking the annual dividend
- amount may average in a quarter with a dividend increase, thereby undercounting it, if
- 20 the annualizing uses all four quarters of dividends. On the other hand, taking one quarter
- and multiplying by four may omit a declared dividend increase that has not yet occurred
- but which will occur. Rather than going to great lengths to determine exactly when each
- company is likely to issue its dividend, multiplying the current dividend yield by 1.5

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advantage of the geometric mean is that it accurately reflects the constantly changing

base of company growth. For example, a hypothetical average growth of 10% computed
by averaging each year's percentage change and dividing it by the number of years may
give a distorted reading of likely future growth. The reason for this distortion is that the
base changes after each percentage change, so that, even if the percentage growth does
not change, the dollars involved do. Everyone knows that 10% of 90 is different from
10% of 100, so the geometric mean makes more sense if an investor plans to hold a stock
investment for more than the period over which the simple percentage change is
calculated, usually a year. On the other hand, some investors wish to trade frequently
and, for them, the annual arithmetic change may be adequate, provided they wish to sell
the stock at the end of the period for which the simple average is computed.
Both measurements of growth show that the Small Group actually experienced
diminishing earnings per share. The Large Group grew at a 9.84% compounded rate over
the most recent three years, while the Small Group's earnings shrank nearly $2\frac{1}{2}\%$,
the most recent three years, while the Small Group's earnings shrank nearly 2½%, although there was variation among the companies in each group. There is a trade-off
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1	The dimension of time played a role in the data on EPS and other indicators of
2	growth. More recent trends received more weight. I calculated the mean and the median
3	for three, five and ten years' data from Value Line and then averaged the result.
4	Q. DID YOU USE THE SAME PROCEDURES FOR YOUR DIVIDEND PER
5	SHARE ("DPS"), BOOK VALUE PER SHARE ("BVPS"), AND SALES DATA?
6	A. Yes I did. The trends for this data are generally similar to those for EPS, both in
7	terms of trends over time and in respect to the relative gains of the two Groups. This data
8	appears in Schedules DHC-3, DHC-4, and DHC-5. The difference between the groups is
9	especially great, proportionately, with respect to DPS and BVPS, but the gap is narrower
10	with respect to sales growth. BVPS is notably growing faster among the Large Group,
11	which, in the past three years has averaged 8.63% compounded annual growth, while the
12	Small Group has averaged a 4.80% compound annual growth rate. With sales increasing
13	almost as fast among the Small Company Group and the change in the increase slightly
14	higher among the smaller companies, there may be a long-run convergence in growth
15	between the two groups.
16	Q. WHY DID YOU USE GROWTH FORECASTS IN YOUR
17	CALCULATIONS AND HOW DID YOU USE THEM?
18	A. All the data that I have discussed so far is retrospective – it looks at the past.
19	Relying on historical data alone – called an "ex ante" analysis – assumes that the future
20	will be much like the past, which may not be true. On the other hand, a completely
21	prospective analysis – an "ex post" calculation of the cost of equity – has the flaw of
22	being speculative since it attempts to predict the outcome of very complex economic

events. Professional analysts make careers of such prediction and they influence

- 1 investors, so it is only reasonable to take their predictions into consideration. A
- 2 combination of prospective and retrospective analyses reflects the data investors can
- 3 consult before investing.
- 4 Value Line predictions regarding EPS were readily available for both the Large
- 5 and most of the Small Group companies. They were not available for both Groups for
- 6 the other statistics and I did not use data that applied only to one of the two Groups.
- 7 Where Value Line EPS forecasts were not available for three of the Small Group
- 8 companies, I used projections from Morningstar.com.
- 9 The data, shown in Schedule DHC-7, reveal an interesting pattern. Within the
- 10 Small Group, there is a tendency toward a "rebound" among the poorest performers and
- 11 moderation among the better performers.
- 12 Q. WHAT WERE YOUR RESULTS FOR THE DCF GROWTH RATE, THE
- 13 **"g" FACTOR?**
- 14 A. Weighing both historical experience and analysts' projections, I arrived at a
- growth rate of 6.32% for the Small Group and 7.65% for the Large Group. The results
- are shown on Schedule DHC-8.
- 17 Q. HOW DID YOU CALCULATE THE DIVIDEND COMPONENT OF
- 18 YOUR DCF ANALYSIS?
- 19 **A.** I used yield data from the most recent 90 days of data for which I could obtain
- data from *Yahoo! Finance*. I believe that this period is long enough to be typical and yet
- 21 short enough to provide sufficiently contemporary data. I averaged the dividend yield for
- each company and then averaged the yield for each to the two Groups. Each Group's
- 23 average was then multiplied by "1 + g" to take into account possible dividend growth in

- the next twelve months. My results were an equity capital cost of 9.45% for the Small
- 2 Group, 10.08% for the Large Group, which indicate an overall DCF equity cost of 9.76%.
- 3 Q. DESCRIBE THE BASIS FOR YOUR OTHER METHOD FOR
- 4 DETERMINING THE APPROPRIATE RETURN ON EQUITY FOR USSC.
- 5 A. The other method I used to ascertain the cost of equity capital relies upon the
- 6 Capital Asset Pricing Model or Method ("CAP-M"). Under this model, one measures the
- 7 risk of an investment against a risk-free investment. The Capital Asset Pricing Model
- 8 (CAP-M) quantifies that risk and, based on that risk, the required return on an
- 9 investment, compared to all other securities. In practice, rather than comparing a stock
- investment to all other securities, it is compared to all other stocks in a particular stock
- index. If the stock carries some risk particular to it, investors are assumed to be able to
- 12 avoid that risk by diversifying their investments through holding a portfolio, thereby
- eliminating the idiosyncratic, or "non-systemic," risk. The remaining risk is systemic –
- 14 the risk of the stock shared with the rest of the market. Note that elimination of
- 15 non-systemic risk does not mean that the differences in returns are eliminated, just that
- particular threats to returns can be neutralized.
- 17 The difference between the market investment and risk-free investment is a
- measurement of the risk of an investment, other things being equal. Of course, other
- things are never quite equal. This Model treats the fluctuation of the return of an
- 20 investment against alternative investments as a prime concern. A statistic called "Beta"
- 21 ("β") measures the degree of reliability or unreliability of an investment, compared to all
- 22 other investments, which is a form of risk. β is the covariance of the stock of a potential
- 23 investment and all other stocks. A β of "1" indicates perfect correspondence between a

- 1 stock's variation and the variation of the all other stocks combined. A β below "1"
- 2 indicates a stock that is less risky than the market as a whole, while a β above "1"
- 3 indicates a stock that is riskier than the overall market. The formula for CAP-M is:

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$$K = R_f + (\beta * (R_f - R_m))$$

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- 7 where K is the cost of equity capital; R_f is the risk-free rate of return; and R_m is the
- 8 market rate of return.

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Q. HOW DID YOU PERFORM YOUR CAP-M ANALYSIS AND ARRIVE AT

YOUR CAP-M RESULT?

- 12 **A.** I used a retrospective and a prospective CAP-M analysis to arrive at a preliminary
- range. I then excluded extremes based on a preference for the geometric mean and the
- 14 DCF results.
- The retrospective analysis drew from two sources. Value Line publishes β
- 16 statistics in its quarterly compilations of data on each company. As β changes frequently,
- it is important to use one source so as to ensure a consistent measurement. I averaged the
- β's of all the water companies for which β was available in the two Groups (see Schedule
- 19 DHC-9). My second source was the data compiled by Ibbotson Associates in its annual
- 20 yearbook, Stocks, Bonds, Bills & Inflations, Valuation Edition, 2006. I used the total
- 21 returns for the S&P 500 from 1926-2005, which is 10.4%. This number, when plugged
- 22 into the CAP-M equation produces a cost of equity of 9.37%, not far from the DCF
- 23 result. I included, too, the results using the arithmetic mean, according to the Ibbotson

- data, which yields a 10.92% cost of equity. Since using the arithmetic mean, especially
- 2 for data over such a long period, produces inflation of returns, I averaged the two results,
- which produces a 10.14%, which, for reasons I will discuss shortly, should be regarded as
- 4 the top end of my CAP-M results, with 9.37% being at the lower end.
- For my prospective analysis, I used figures prepared by Roger G. Ibbotson and a
- 6 colleague. They co-authored an article which calculated the expected long-term equity
- 7 risk premium to be about 6%, using arithmetic means, and about 4%, using geometric
- 8 means. Using his forward-looking risk premia in the CAP-M formula, results in returns
- 9 on equity of 7.91% and 9.49%, which average to 8.70%. Averaging this result with the
- one using retrospective data gives a return on equity of 9.42%.

11 Q. IS THERE ANY OTHER EVIDENCE TO SUPPORT THIS RESULT?

- 12 **A.** There is indirect evidence. If one uses the DCF result and places it into the
- 13 CAP-M formula, the result is somewhat under 9%. Using the DCF result, however, is
- subject to the criticism that it double-counts the lower risk of water companies. An
- adjustment to the β , however, eliminates the basis for this criticism. If the β is set to "1,"
- then the lower risk of water companies is eliminated. The result is an equity cost of
- 17 9.79% (Schedule DHC-9). This result is quite close to the CAP-M result.

18 Q. HOW DO YOU INTERPRET THE CAP-M RESULT?

- 19 A. It is confirmation that water companies, like other public utilities that are
- 20 monopolies or near monopolies, are less risky than a typical investment. It is in line,
- 21 though not the same as, the DCF result. Based on the checks for reasonableness, my
- analysis concludes that 9.41% is a reasonable low point and that the top end of my range
- should be no more than 10.14%. Moreover, these results and the DCF result indicate a

1 return on the lower end of my overall CAP-M range.

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- 3 Q. WHAT IS YOUR OVERALL RECOMMENDATION FOR RETURN ON
- 4 **EQUITY FOR USSC?**
- 5 A. Based on my DCF and CAP-M analyses, I recommend a range of 9.41% to
- 6 10.14% with more emphasis upon the lower end. This range is fair and eliminates
- 7 extremes associated with the geometric mean in the prospective CAP-M and with the
- 8 arithmetic mean in the retrospective CAP-M, while containing the Small Company and
- 9 Large Company Groups' DCF results.

PROXY GROUPS OF WATER COMPANIES

{All Dollar Amounts are in millions)

Schedule DHC-1 p. 1 of 1

49.4%

	GROUPS, BY RELATIVE		CAPITALIZA- 1	LONG- TERM	COMMON STOCK RATIO TO
WATER COMPANY	SIZE	REVENUE	TION	DEBT	CAPITAL
AQUA AMERICA	LARGE GROUP	\$571.7	\$1,984.4	\$1,040.1	47.6%
CALIFORNIA WATER	LARGE GROUP	\$355.8	\$670.5	\$291.3	56.6%
AMERICAN STATES	LARGE GROUP	\$292.7	\$560.0	\$267.6	52.2%
SJW	LARGE GROUP	\$201.8	\$426.9	\$196.7	53.9%
MIDDLESEX WATER	SMALL GROUP	\$82.5	\$264.5	\$130.1	50.8%
ARTESIAN	SMALL GROUP	\$50.6	\$172.9	\$91.9	46.8%
CONNECTICUT WATER SERVICE	SMALL GROUP	\$48.7	\$174.7	\$77.3	55.8%
YORK	SMALL GROUP	\$30.4	\$127.6	\$61.1	52.1%
PENNICHUCK	SMALL GROUP	\$26.6	\$64.0	\$49.0	23.4%
BIW	SMALL GROUP	\$9.6	\$20.1	\$9.0	55.2%

Average Capitalization

Earnings per Share History

Schedule DHC-2 p. 1 of 1

6.46%

Large Company Group

	Compounded ("G	npounded ("Geometric") Change		Arithmetic Change		
	<u>3-yr.</u>	<u>5-yr.</u>	<u> 10-yr.</u>	<u>3-yr.</u>	<u>5-yr.</u>	<u> 10-yr.</u>
Amer. States Water	19.47%	-0.30%	1.64%	20.36%	3.71%	3.77%
Aqua America	7.09%	6.54%	8.84%	7.27%	6.65%	8.96%
California Water	3.46%	7.35%	-1.19%	4.17%	8.46%	0.56%
SJW Corp	9.35%	9.10%	N/A	10.20%	9.71%	N/A
Means	9.84%	5.67%	3.10%	10.50%	7.13%	4.43%
Medians	8.22%	6.94%	1.64%	8.73%	7.55%	3.77%

Average of Large Company Group Means & Medians

Small Company Group

	Compounded ("G	ompounded ("Geometric") Change			Arithmetic Change		
	<u>3-yr.</u>	<u>5-yr.</u>	<u> 10-yr.</u>	<u>3-yr.</u>	<u>5-yr.</u>	<u> 10-yr.</u>	
Middlesex Water	10.36%	4.44%	N/A	10.81%	5.32%	N/A	
Artesian Resources	14.87%	6.74%	N/A	14.92%	7.51%	N/A	
Conn. Water Services	-11.03%	-6.44%	N/A	-10.41%	-5.89%	N/A	
York Water Co.	7.49%	6.02%	N/A	13.20%	9.75%	N/A	
Pennichuck	-28.93%	-34.14%	N/A	-7.78%	-21.06%	N/A	
BIW	-7.33%	-35.19%	N/A	-2.93%	-18.88%	N/A	
Means	-2.43%	-9.76%		2.97%	-3.88%		
Medians	· · · · ·	-1.00%		3.94%	-0.28%		

Average of Small Company Group Means & Medians -1.29%

Sources: Value Line for larger companies; Morningstar.com & Zacks.com for smaller

Dividends per Share History

Schedule DHC-3 p. 1 of 1

2.93%

Large Company Group

	Compounded	("Geometric	c") Change	<u>Arith</u>	metic Char	<u>ige</u>
	<u>3-yr.</u>	<u>5-yr.</u>	<u> 10-yr.</u>	<u>3-yr.</u>	<u>5-yr.</u>	<u> 10-yr.</u>
Amer. States Water	1.12%	0.90%	1.05%	1.12%	1.12%	1.11%
Aqua America	7.93%	7.96%	6.70%	7.94%	9.05%	10.00%
California Water	0.89%	0.53%	1.01%	0.89%	0.88%	0.88%
SJW Corp	5.17%	5.80%	N/A	5.18%	5.73%	N/A
Means	3.78%	3.80%	2.92%	3.78%	4.20%	4.00%
Medians	3.15%	3.35%	1.05%	3.15%	3.43%	1.11%

Average of Large Company Group Means & Medians 3.14%

Small Company Group

	Compounded	("Geometric	c") Change	<u>Arith</u>	metic Char	<u>ige</u>
	<u>3-yr.</u>	<u>5-yr.</u>	<u> 10-yr.</u>	<u>3-yr.</u>	<u>5-yr.</u>	<u> 10-yr.</u>
Middlesex Water	1.52%	1.46%	N/A	1.91%	1.18%	N/A
Artesian Resources	1.56%	2.98%	N/A	1.57%	0.77%	N/A
Conn. Water Services	1.52%	1.86%	N/A	1.52%	1.50%	N/A
York Water Co.	6.74%	5.77%	N/A	6.75%	7.42%	N/A
Pennichuck	4.80%	4.34%	N/A	4.80%	5.31%	N/A
BIW	4.26%	3.23%	N/A	4.44%	0.00%	N/A
Means	3.40%	3.27%		3.50%	2.70%	
Medians	2.91%	3.10%		3.18%	1.34%	

Average of Small Company Group Means & Medians

Book Value per Share History

Schedule DHC-4 p. 1 of 1

7.31%

4.18%

Large Company Group

	<u>Compounded</u>	Compounded ("Geometric") Change		Arithmetic Change		
	<u>3-yr.</u>	<u>5-yr.</u>	<u> 10-yr.</u>	<u>3-yr.</u>	<u>5-yr.</u>	<u> 10-yr.</u>
Amer. States Water	6.00%	4.71%	4.22%	6.01%	4.75%	4.25%
Aqua America	9.23%	10.90%	9.97%	9.25%	11.05%	10.08%
California Water	8.24%	7.17%	4.13%	8.41%	7.32%	4.27%
SJW Corp	11.06%	8.84%	N/A	11.14%	8.94%	N/A
Mean		7.90%	6.11%	8.70%	8.02%	6.20%
Median	s 8.74 %	8.01%	4.22%	8.83%	8.13%	4.27%

Average of Large Company Group Means & Medians

Small Company Group

	Compounded ("Geometric")		c") Change	<u>Arith</u>	nmetic Char	<u>ige</u>
	<u>3-yr.</u>	<u>5-yr.</u>	<u> 10-yr.</u>	<u>3-yr.</u>	<u>5-yr.</u>	<u> 10-yr.</u>
Middlesex Water	8.92%	6.67%	N/A	9.02%	6.77%	N/A
Artesian Resources	4.01%	N/A	N/A	4.01%	-3.21%	N/A
Conn. Water Services	3.51%	4.63%	N/A	3.53%	4.66%	N/A
York Water Co.	12.88%	9.03%	N/A	13.08%	9.25%	N/A
Pennichuck	3.80%	3.22%	N/A	4.15%	3.45%	N/A
BIW	-4.35%	-3.22%	N/A	-4.34%	-3.21%	N/A
Means	4.80%	4.07%		4.91%	2.95%	
Medians	3.91%	4.63%		4.08%	4.06%	

Average of Small Company Group Means & Medians

Sales/Revenue per Share History

Schedule DHC-5 p. 1 of 1

Large Company Group

	Compounded ("Geometric") Change		<u>c") Change</u>	<u>Arithmetic Change</u>		
	<u>3-yr.</u>	<u>5-yr.</u>	<u> 10-yr.</u>	<u>3-yr.</u>	<u>5-yr.</u>	<u> 10-yr.</u>
Amer. States Water	8.09%	6.34%	5.89%	8.17%	6.42%	6.04%
Aqua America	13.26%	11.66%	15.85%	13.39%	11.80%	17.00%
California Water	6.50%	6.28%	6.24%	6.63%	6.36%	6.42%
SJW Corp	8.12%	6.81%	N/A	8.15%	6.85%	N/A
Mean	s 8.99 %	7.77%	9.33%	9.08%	7.86%	9.82%
Median	s 8.10 %	6.58%	6.24 %	8.16%	6.64%	6.42%

Average of Large Company Group Means & Medians

7.92%

Small Company Group

	Compounded ("Geometric") Change		<u>Arith</u>	Arithmetic Change		
	<u>3-yr.</u>	<u>5-yr.</u>	<u> 10-yr.</u>	<u>3-yr.</u>	<u>5-yr.</u>	<u> 10-yr.</u>
Middlesex Water	8.16%	6.35% N	N/A	8.18%	6.39%	N/A
Artesian Resources	10.22%	8.72%	N/A	10.32%	16.83%	N/A
Conn. Water Services	-0.14%	0.65%	N/A	-0.12%	0.67%	N/A
York Water Co.	11.15%	8.15%	N/A	11.29%	8.30%	N/A
Pennichuck	4.61%	1.45%	N/A	4.63%	2.94%	N/A
BIW	13.27%		N/A	16.27%	N/A	N/A
Magne	7.000/	5.0 69/	DI / A	9.400/	7.000/	TAT / A
Means Medians		5.06% 6.35%	N/A N/A	8.43% 9.25%	7.03% 6.39%	N/A N/A
Medians	9.19/0	0.35/0	11/17	9.25/0	U.39 /0	IN / A

Average of Small Company Group Means & Medians

7.45%

Current Dividend Yields

p. 1 of 1

Large Company Group

		COMPARISON
	90-DAY YIELD	WITH SPOT YIELD
Amer. States Water	2.46%	2.21%
Aqua America	2.01%	2.18%
California Water	3.01%	2.78%
SJW Corp	1.85%	1.85%

Group Average **2.33**% **2.26**%

Small Company Group

	COMPARISON
90-DAY YIELD	WITH SPOT YIELD
3.65%	3.65%
3.49%	3.50%
3.57%	3.63%
2.72%	2.72%
2.65%	2.67%
2.15%	1.99%
	3.65% 3.49% 3.57% 2.72% 2.65%

Group Average **3.04**% **3.03**%

Note:

90-day period from June 11-October 15, 2007; days=market-days

Source:

Yahoo! Finance

Analysts' Growth Estimates of Earnings Per Share

Manaina

Large Company Group

	<u>value</u>	<u>Morning-</u>		
	<u>Line</u>	<u>star</u>	<u>Average</u>	
Amer. States Water	10.08%	5.00%	7.54%	
Aqua America	8.45%	11.20%	9.82%	
California Water	9.92%	7.70%	8.81%	
SJW Corp	9.12%	10.00%	9.56%	
		Mean	8.9%	
		Median	9.2%	
		Median	9.4 /0	

Small Company Group

	<u>Value</u>	Morning-	
	<u>Line</u>	<u>star</u>	<u>Average</u>
Middlesex Water	2.9%	7.5%	5.2%
Artesian Resources	N/A	8.1%	8.1%
Connecticut Water Services	14.3%	15.0%	14.6%
York Water Company	6.6%	10.7%	8.6%
Pennichuck	N/A	15.1%	15.1%
BIW	N/A	N/A	N/A
	Mean 1		10.3%
		Median	8.6%

9.5%

9.1%

Note:

Morningstar estimates are from www.morningstar.com, accessed September 17, 2007 Value Line estimates are from Value Line Plus Edition, October 26, 2007

Summary of Discounted Cash Flow Calculation

p. 1 of 1

Small G	roup		Large Gro	arge Group		
	Growth	Forecast	Average	Growth	Forecast	Average
EPS DPS BVPS SALES	-1.29% 2.89% 4.18% 6.76%	9.50%		6.46% 3.14% 7.31% 7.92%	9.10%	
	3.13%	9.50%	6.32%	6.21%	9.10%	7.65%
	Dividend Y		3.04%			2.33%
	Adjustmen	it Factor	1.0316			1.0383
	Adjusted I	Div. Yield	3.14%			2.42%
			9.45%			10.08%
		Average of	os:	9.76%		

CAPITAL ASSET PRICING MODEL CALCULATIONS

Schedule DHC-9 p. 1 of 1

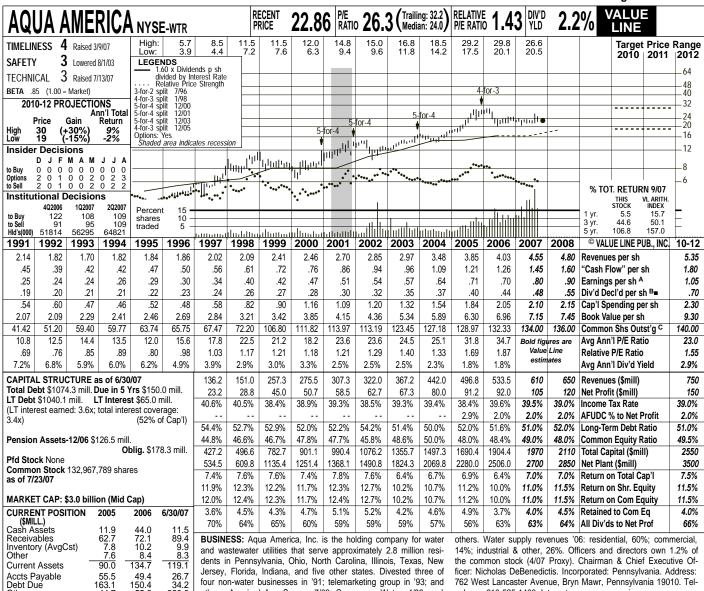
Company	β	
Amer. States Water	0.90	
Aqua America	0.85	Key to Symbols
California Water	0.95	r _f = Risk-Free Rate of Return
SJW Corp	0.85	
Middlesex Water	0.80	r _m = Market-Risk Rate of Return
Conn. Water Services	0.85	
York Water Co.	0.55	β= Beta
Pennichuck	no VL data	
BIW	no VL data	
Artesian Resources	no VL data	
	0.82	

Ibbotson Growth, Geometric Mean Ibbotson Growth, Arithmetic Mean	4.65% 4.65%	β 10.40% 12.30%	0.82 0.82	r_m - r_f 5.75% 7.65%	9.37% 10.92%	
Average of Geometric and Arithmetic Mean Result	3				10.14%	
Ibbotson, Long-Run Forward Looking Equity Risk Ibbotson, Long-Run Forward Looking Equity Risk Average of Geometric and Arithmetic Mean Results	3.97% 5.90%	7.91% 9.49%	8.70%			
Average of Ibbotson Retrospective and Prospective	Approaches	S			9.42%	
Result, using DCF as input with β =1		4.65%	9.76%	β 1.00	9.76%	

Sources:

β -- Value Line

rf=30-yr U.S. Treasury Security yield as of October 19, 2007, from *Blue Chip Financial Forecasts*, Nov. 1, 2007 Ibbotson, R., Peng, C., "Long-Run Stock Returns: Participating in the Real Economy," *Financial Analysts' Jounal*, January/February 2003, pp. 88-98.



Jersey, Florida, Indiana, and five other states. Divested three of four non-water businesses in '91; telemarketing group in '93; and others. Acquired AquaSource, 7/03; Consumers Water, 4/99; and

ficer: Nicholas DeBenedictis. Incorporated: Pennsylvania. Address: 762 West Lancaster Avenue, Bryn Mawr, Pennsylvania 19010. Telephone: 610-525-1400. Internet: www.aquaamerica.com

Fix. Chg. Cov. 377% 360% 360% Past Est'd '04-'06 ANNUAL RATES Past 10 Yrs. to '10-'12 of change (per sh) 5 Yrs. Revenues "Cash Flow 7.5% 10.0% 8.5% 9.0% 6.0% 7.0% 9.0% 6.5% 8.0% 7.0% Earnings Dividends Book Value 9.5% 11.0% 6.5%

Current Liab.

55.5

255.6

163 1

263.3

26.7 34.2

284.8

Cal-	QUAR	Full			
endar	Mar.31	Jun.30	Sep.30	Dec.31	Year
2004	99.8	106.5	120.3	115.4	442.0
2005	114.0	123.1	136.8	122.9	496.8
2006	118.0	131.7	147.0	136.8	533.5
2007	137.3	150.6	165	157.1	610
2008	145	165	185	155	650
Cal-	EA	RNINGS F	ER SHARI	A	Full
endar	Mar.31	Jun.30	Sep.30	Dec.31	Year
2004	.13	.14	.20	.17	.64
2005	.15	.17	.22	.17	.71
2006	.13	.17	.21	.19	.70
2007	.13	.18	.25	.24	.80
2008	.20	.24	.24	.22	.90
Cal-	QUAR	TERLY DIV	IDENDS P	AID B =	Full
endar	Mar.31	Jun.30	Sep.30	Dec.31	Year
2003	.084	.084	.084	.09	.34
2004	.09	.09	.09	.098	.37
2005	.098	.098	.098	.107	.40
2006	.107	.107	.115	.115	.44
2007	.115	.115	.125		

(A) Primary shares outstanding through '96; diluted thereafter. Excl. nonrec. gains (losses): '91, (34¢); '92, (38¢); '99, (11¢); '00, 2¢; '01, 2¢; '02, 5¢; '03, 4¢. Excl. gain from disc. operations: '96, 2¢. Next earnings report due early

(B) Dividends historically paid in early March, June, Sept. & Dec. ■ Div'd. reinvestment plan

Agua America continues to be active on the acquisition front. So far this year, the company has completed 14 purchases that have expanded its reach to new areas of Texas, Pennsylvania, Illinois, and Florida. These additions have also added approximately 35,000 new customers. Looking ahead, we expect that management will continue to aggressively seek further expansion opportunities. Aqua possesses a good track record in regards to acquisitions, and we assume that any additional purchases would benefit revenues and profits over the next few years.

The company will soon release its September-period financial results. For the quarter, Aqua likely posted share earnings of \$0.25, almost 20% better than the year-earlier period. Its recent acquisitions, coupled with rate hikes in several states, likely led to the strong results. We expect that the company will be able to implement additional rate hikes over the next few months, and for the year Aqua will likely register a share-net gain of about 14%. Looking ahead,

The prospects for 2008 and beyond appear solid. In our view, recent acquisiavailable (5% discount). **(C)** In millions, adjusted for stock splits.

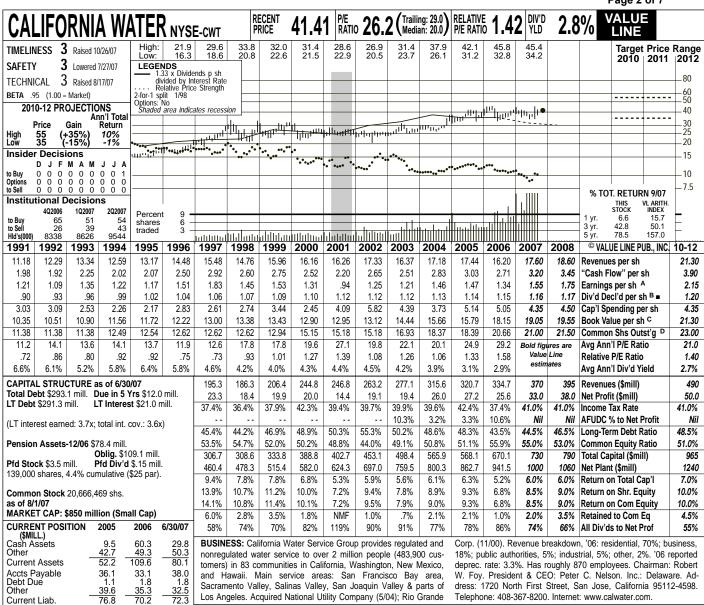
tions should help Aqua increase its revenues annually at a mid-single-digit rate. Furthermore, additional rate hikes will likely lead to the operating margin widening and help advance share earnings over the next few years. In sum, we estimate that annual share net will advance by 5%-10% out to the 2010-2012 period.

These shares do not stand out for the short or long term. Although we estimate that Aqua America will register 14% and 13% share-net gains in 2007 and 2008, respectively, our Timeliness Ranking System suggests that this issue will lag the year-ahead market. In addition, even though the company possesses solid growth prospects out to 2010-2012, this stock already trades well within our projected Target Price Range for that timeframe, limiting appreciation potential. That said, our earnings estimates would likely be enhanced if WTR can complete some more acquisitions over the next few years. Lastly, although Aqua has raised its quarterly dividend every year over the past decade, income-oriented investors can probably find better options elsewhere.

Tan Gendler October 26, 2007

> Company's Financial Strength Stock's Price Stability B+ 90 Price Growth Persistence 80 **Earnings Predictability** 100

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Los Angeles. Acquired National Utility Company (5/04); Rio Grande California Water Service Group is

doing well. The water utility provider

reported earnings of \$0.37 a share in the

second quarter, 19% better than last year.

Revenues increased 18%, to \$96 million

thanks to favorable weather conditions

and higher usage rates. Earnings com-

parisons would have been even better if

not for higher water production and

Possible changes to the regulatory

process augur well for the company going forward. California Water files

general rate cases to recover nonopera-

Telephone: 408-367-8200. Internet: www.calwater.com

ANNUAL RATES Past Est'd '04-'06 Past 10 Yrs. to '10-'12 of change (per sh) 5 Yrs. 1.0% 3.0% 2.5% .5% 4.0% 5.5% 7.0% 2.5% 2.5% Revenues "Cash Flow" 1.0% Dividends Book Value 3.5% 5.0% 4.5%

OHADTEDLY DEVENUES (\$ mill)

361%

Fix. Chg. Cov

317%

380%

Cal-	QUAR	Full			
endar	Mar.31	Jun.30	Sep.30	Dec.31	Year
2004	60.2	88.9	97.1	69.4	315.6
2005	60.3	81.5	101.1	77.8	320.7
2006	65.2	81.1	107.8	80.6	334.7
2007	71.6	95.8	117.6	85.0	370
2008	76.0	101	126	92.0	395
Cal-	EA	RNINGS P	ER SHARI	Α	Full
endar	Mar.31	Jun.30	Sep.30	Dec.31	Year
2004	.08	.59	.59	.20	1.46
2005	.03	.41	.71	.32	1.47
2006	.04	.31	.68	.31	1.34
2007	.07	.37	.76	.35	1.55
2008	.10	.45	.82	.38	1.75
Cal-	QUAR	TERLY DIV	IDENDS PA	AID B =	Full
endar	Mar.31	Jun.30	Sep.30	Dec.31	Year
2003	.281	.281	.281	.281	1.12
2004	.283	.283	.283	.283	1.13
2005	.285	.285	.285	.285	1.14
2006	.2875	.2875	.2875	.2875	1.15
2007	.290	.290	.290		
	1				

(B) Dividends historically paid in mid-Feb., May, Aug., and Nov. ■ Div'd reinvestment plan

maintenance costs.

tional costs for eight districts every year, making it dependent on the California Utilities Commission which is in charge of keeping a balance between consumers and utility companies operating in the Golden State. However,

the board has ruled that the company can now file one GRC for the entire company every three years beginning in 2009, which should help to reduce potential reg-ulatory lag. Authorization of other parts of the Water Action Plan would further streamline the filing process and possibly even reduce earnings volatility by invok-

ing a weather normalization clause. That said, we currently look for earnings growth of 15%-plus this year.

Capital requirements pose a problem, though. Infrastructure costs have climbed considerably since the start of the decade and are likely to remain high for the foreseeable future, given the infrastructure repairs and more stringent EPA requirements that have arose. However, California is in no shape to meet these challenges on its own, with less than \$30 million in cash on the balance sheet at the end of the most recent quarter. As such, CWT will probably have to issue more shares and/or debt in order to foot the bill. We look for increased interest expense and a higher share count to slow earnings growth a bit in 2008.

Investors have better options elsewhere. California shares have appreciated 13% since our July report and are now trading well within our 2010-2012 Target Price Range. Meanwhile, the increase in share price, coupled with the capital constraints we envision, limit this issue's dividend yield.

Price Growth Persistence

Earnings Predictability

October 26, 2007

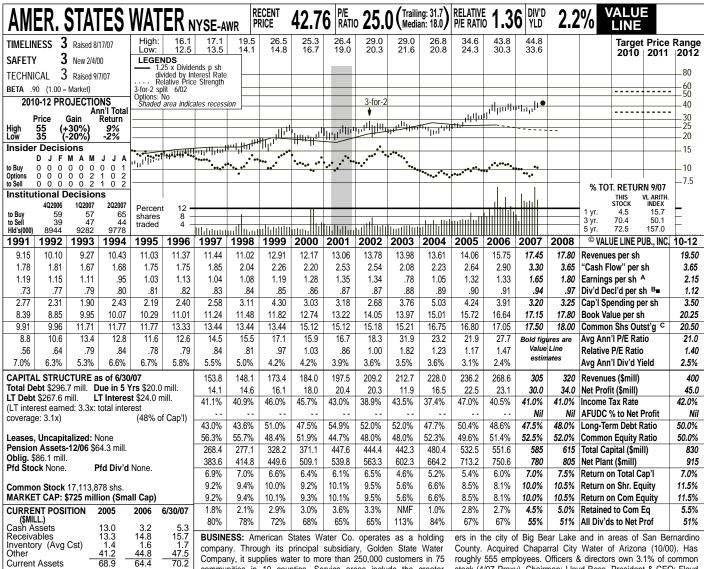
Company's Financial Strength Stock's Price Stability

B++ 70 75 70

(A) Basic EPS. Excl. nonrecurring gain (loss): '00, (7¢); '01, 4¢; 02, 8¢. Next earnings report

(C) Incl. deferred charges. In '06: \$69.5 mill., \$3.36/sh. (D) In millions, adjusted for split.

Andre J. Costanza



company. Through its principal subsidiary, Golden State Water Company, it supplies water to more than 250,000 customers in 75 communities in 10 counties. Service areas include the greater metropolitan areas of Los Angeles and Orange Counties. The company also provides electric utility services to nearly 23,250 custom-

County. Acquired Chaparral City Water of Arizona (10/00). Has roughly 555 employees. Officers & directors own 3.1% of common stock (4/07 Proxy). Chairman: Lloyd Ross. President & CEO: Floyd Wicks. Incorporated: CA. Addr.: 630 East Foothill Boulevard, San Dimas, CA 91773. Tele.: 909-394-3600. Web: www.aswater.com.

Fix. Chg. Cov. ANNUAL RATES Past Est'd '04-'06 Past 10 Yrs. to '10-'12 of change (per sh) 5 Yrs. Revenues "Cash Flow 3.0% 4.0% 2.5% 2.0% 4.0% 6.0% 1.5% 1.0% -0.5% 1.0% 9.5% 3.5% Earnings Dividends Book Value 4.5% 6.0%

19.7 27.6

77.6

413%

64.4

24.0 32.6

85.9

268%

70.2

25.0 29.1

83.9

330%

Current Assets

Accts Payable Debt Due

Current Liab.

Cal- endar			VENUES (Sep. 30		Full Year
2004	46.7	59.3	69.0	53.0	228.0
2005	49.8	60.5	68.1	57.8	236.2
2006	64.3	63.0	75.0	66.3	268.6
2007	72.3	79.2	82.5	71.0	305
2008	77.0	82.0	86.0	75.0	320
Cal-	E/	RNINGS P	ER SHARI	A	Full
endar	Mar.31	Jun. 30	Sep. 30	Dec. 31	Year
2004	.08	.30	.52	.15	1.05
2005	.22	.34	.47	.29	1.32
2006	.35	.36	.32	.30	1.33
2007	.31	.42	.54	.38	1.65
2008	.37	.45	.57	.41	1.80
Cal-	QUAR	TERLY DIV	IDENDS P	AID B=	Full
endar	Mar.31	Jun.30	Sep.30	Dec.31	Year
2003	.221	.221	.221	.221	.88
2004	.221	.221	.221	.225	.89
2005	.225	.225	.225	.225	.90
2006	.225	.225	.225	.235	.91
2007	.235	.235	.235		

American States Water benefited from favorable weather in the second quarter. Indeed, warm and dry conditions, particularly in California, where the water utility does most of its business, resulted in higher usage rates and 26% higher revenues. As a result, the company posted 17% share-net improvement.

A better regulatory environment will likely be the catalyst heading forward, though. All utilities are dependent on government administrators and their rulings, and American is no different. Although the California Public Utilities Commission (CPUC), the Golden State's advisory board, has been far more constructive since Governor Schwarzenegger took over in late 2003, we think that things may get even better. The CPUC is currently considering authorizing some of the proposals included in the Water Action Plan of 2005, which would streamline the decision-making process and perhaps even effecting a weather normalization clause. We currently look for earnings growth of 24% this year and 9% in 2008.

Still, the company has been aggressively looking to increase its exposure

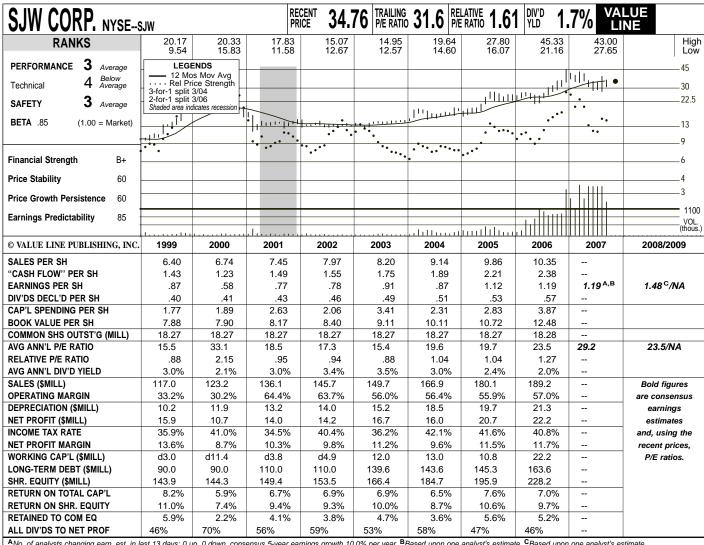
to the non regulated sector. Despite the potential improvements mentioned above, American is still at the mercy of regulatory authorities. As a result, it has been targeting military bases as a way to limit its dependence on state regulators. And it is having some success. American has inked two significant deals with military bases since our last report. The first is a 50-year deal, totaling \$143 million, to operate and maintain the water and wastewater systems at Fort Jackson, South Carolina. The second is a 50-year agreement to do the same at Fort Bragg, North Carolina. The latter deal is worth \$575 million and will include periodic price redetermination adjustments and modifications for changes in circumstances. We view the foray into military bases as a good move.

Nevertheless, the stock lacks investment appeal. The share price has appreciated 19% since our July review and factors in the bulk of the gains we expect out to late decade. Income-minded investors have better options, also, given the capital constraints we suspect the company faces. Andre J. Costanza October 26, 2007

(A) Primary earnings. Excludes nonrecurring gains: '91, 73¢; '92, 13¢; '04, 14¢; '05, 25¢; '06, 6¢. Next earnings report due early Novem-

(B) Dividends historically paid in early March, June, September, December. ■ Div'd reinvestment plan available. (C) In millions, adjusted for splits.

Company's Financial Strength Stock's Price Stability B++ 75 Price Growth Persistence 75 **Earnings Predictability** 60



Ano. of analysts changing earn. est. in last 13 days: 0 up, 0 down, consensus 5-year earnings growth 10.0% per year. Based upon one analyst's estimate. CBased upon one analyst's estimate.

		ANNUAL	RATES			ASSETS (\$mill.)	2005	2006	6/30/07
of chan	ge (per	share)	5 Yrs.		1 Yr.	Cash Assets	9.4	3.8	5.7
Sales	J - 11 -	,	7.5%		5.0%	Receivables	18.4	20.9	29.4
"Cash F	low"		9.5%		7.5%	Inventory	.6	.9	.9
Earning			7.5%		6.0%	Other	3.3	33.9	2.1
Dividen			5.5%		6.5%	Current Assets	31.7	59.5	38.1
Book Va	alue		7.0%	1	6.5%	Curront 7,000to	01	00.0	00.1
Fiscal	QUA	RTERLY	SALES (\$	mill.)	Full	Property, Plant			
Year	1Q	2Q	3Q `	4Q	Year	& Equip, at cost	695.0	776.2	
40/04/05	00.0	44.0	50.5	40.5	400.4	Accum Depreciation	210.2	234.5	
12/31/05	33.3	44.8	58.5	43.5	180.1	Net Property	484.8	541.7	604.0
12/31/06	33.7	47.9	63.1	44.5	189.2	Other	71.2	104.7	103.8
12/31/07	39.0	55.1				Total Assets	587.7	705.9	745.9
12/31/08									
Fiscal	FΔ	RNINGS	PER SHA	RF	Full	LIABILITIES (\$mill.)			
Year	1Q	2Q	3Q	4Q	Year	Accts Payable	5.1	7.3	5.1
					1.000	Debt Due	.3	16.0	4.1
12/31/04	.09	.27	.30	.21	.87	Other	15.5	13.9	25.3
12/31/05	.15	.31	.53	.13	1.12	Current Liab	20.9	37.2	34.5
12/31/06	.14	.35	.48	.22	1.19				
12/31/07	.11	.29	.47	.29					
12/31/08	.21					LONG-TERM DEBT A	ND EQUIT	Υ	
Cal-	QUAF	RTERLY D	IVIDENDS	PAID	Full	as of 6/30/07			
endar	1Q	2Q	3Q	4Q	Year	Total Debt \$200.8 mill		Due in 5	7rs. NA
2004	.128	.128	.128	.128	.51	LT Debt \$196.7 mill.			
2005	.134	.134	.134	.134	.54	Including Cap. Lease	s NA		
2006	.141	.141	.141	.141	.56				of Cap'l)
2007	.151	.151	.151	.141	.50	Leases, Uncapitalized	i Annual re	ntals NA	
2007	.101	.101	.101			Pension Liability \$26.	2 mill in '06	.vo 6122 r	nill in 'OE
	INSTI	TUTIONA	L DECISIO	NS		Pension Liability \$20.	3 111111. 111 00	1 VS. \$13.2 I	11111. 111 03
		4Q'06	1Q'07	2	Q'07	Pfd Stock None		Pfd Div'd I	Paid None
to Buy		33	35		40	Common Ctook 40 000	400 ahar		
to Sell		22	23		27	Common Stock 18,333,	403 snares	/F 40	/ of Con!!\
LIId's/O	00)	70.44	7005		000	I		(54%	6 of Cap'l)

Hld's(000)

7341

7905

8906

INDUSTRY: Water Utility

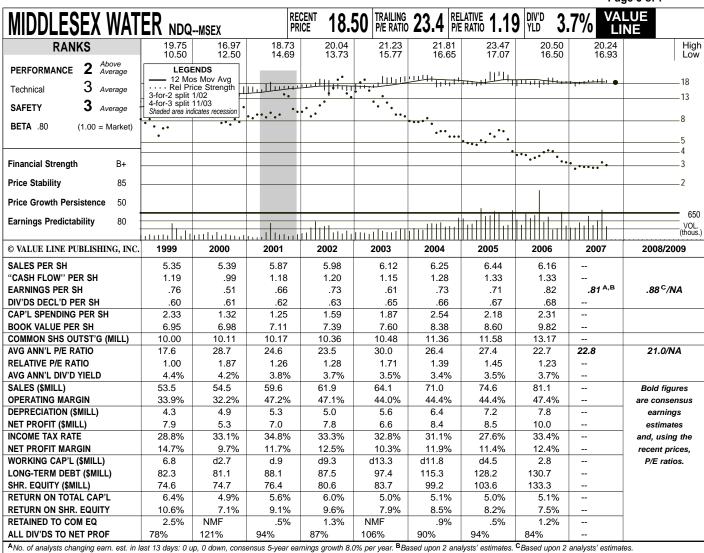
BUSINESS: SJW Corp. engages in the production, purchase, storage, purification, distribution, and retail sale of water. It provides water service to customers in Cupertino, San Jose, Campbell, Monte Sereno, Saratoga, and the Town of Los Gatos, as well as in the county of Santa Clara, California. The company also offers nonregulated waterrelated services, including water system operations, billings, and cash remittance services. SJW Land, a wholly owned subsidiary, owns commercial buildings and other undeveloped land primarily in the San Jose and California; some properties in Florida, Texas, and Connecticut; and a 70% limited partnership interest in 444 West Santa Clara Street, L.P. As of June 30, SJW provided water service to a population of approximately one million people in the metropolitan San Jose area; and to approximately 7,500 connections that served approximately 22,000 residents in the region between San Antonio and Austin, Texas. Has 357 employees. Chairman: Charles J. Toeniskoetter. Inc.: CA. Address: 374 West Santa Clara Street, San Jose, CA 95113. Tel.: (408) 279-7800. Internet: http://www.sjwater.com.

L.Y.

October 26, 2007

TOTAL SHAREHOLDER RETURN

3 Mos.	6 Mos.	1 Yr.	3 Yrs.	5 Yrs.
3.07%	-14.82%	16.25%	121.26%	200.35%



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	ļ	NNUAL I	RATES			A
of chang Sales "Cash F Earning Dividend Book Va	Flow" s ds	hare)	5 Yrs. 2.5% 3.5% 3.5% 2.0% 5.0%	15 15	Yr. 4.5% 0.5% 5.5% 1.5% 4.5%	C R In O C
Fiscal Year			SALES (\$	mill.) 4Q	Full Year	Р
rear	1Q	2Q	3Q	4Q	rear	Α
12/31/05	16.7	18.4	20.8	18.7	74.6	N
12/31/06	18.2		22.6	19.3	81.1	0
12/31/07	19.0	21.8				T
12/31/08						١.
Fiscal	EA	RNINGS	PER SHA	RE	Full	L
Year	1Q	2Q	3Q	4Q	Year	D
12/31/04	.09	.16	.29	.19	.73	0
12/31/05	.12	.16	.26	.17	.71	C
12/31/06	.15	.25	.28	.14	.82	
12/31/07	.13	.24	.30	.14		
12/31/08	.12					L
Cal-	QUAR	TERLY D	IVIDENDS	PAID	Full	
endar	1Q	2Q	3Q	4Q	Year	T
2004	.165	.165	.165	.168	.66	L Ir
2005	.168	.168	.168	.17	.67	"
2006	.17	.17	.17	.173	.68	L
2007	.173	.173	.173			_
	INSTIT	UTIONAL	DECISIO	NS		P
		4Q'06	1Q'07	20	Q'07	P
to Buy		21	19		26	

2182

14

3085

13

3289

to Sell

Hld's(000)

ASSETS (\$mill.) Cash Assets Receivables Inventory (Avg cost) Other Current Assets	3.0 11.8 1.3 .9 17.0	2006 5.8 12.6 1.3 1.2 20.9	6/30/07 2.5 16.0 1.4 1.7 21.6
Property, Plant & Equip, at cost Accum Depreciation Net Property Other Total Assets	343.0 55.0 288.0 19.4 324.4	376.8 59.7 317.1 32.3 370.3	325.6 35.1 382.3
LIABILITIES (\$mill.) Accts Payable Debt Due Other Current Liab	6.0 5.9 9.6 21.5	5.5 2.5 10.1 18.1	7.5 3.4 11.7 22.6

LONG-TERM DEBT AND EQUITY as of 6/30/07

Total Debt \$133.4 mill. Due in 5 Yrs. NA LT Debt \$130.1 mill. Including Cap. Leases NA

(50% of Cap'l) eases, Uncapitalized Annual rentals NA

Pension Liability \$16.4 mill. in '06 vs. \$6.7 mill. in '05

fd Stock \$4.0 mill. Pfd Div'd Paid \$.2 mill. (1% of Cap'l)

Common Stock 13,200,000 shares

(49% of Cap'l)

INDUSTRY: Water Utility

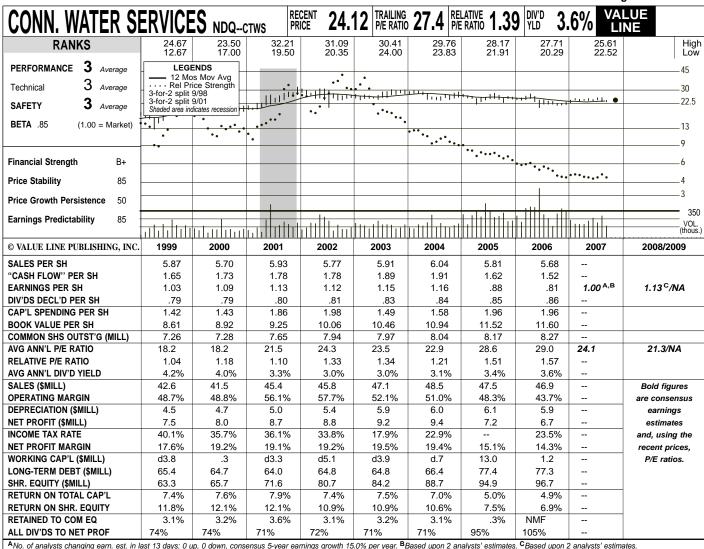
BUSINESS: Middlesex Water Company engages in the ownership and operation of regulated water utility systems in New Jersey and Delaware, as well as a regulated wastewater utility in New Jersey. It offers contract operations services and a service line maintenance program through its nonregulated subsidiary, Utility Service Affiliates, Inc. The company's water utility system treats, stores, and distributes water for residential, commercial, industrial, and fire prevention purposes. Under a special contract, it also provides water treatment and pumping services to the Township of East Brunswick. Middlesex Water's other New Jersey subsidiaries offer water and wastewater services to residents in Southampton Township. The company's Delaware subsidiaries, Tidewater Utilities, Inc., Southern Shores Water Company, LLC, and Tidewater Environmental Services, Inc., offer water services to retail customers in New Castle, Kent, and Sussex counties. Has 243 employees. Chairman: J. Richard Tompkins. Inc.: NJ. Address: 1500 Ronson Road, P.O. Box 1500, Iselin, NJ 08830. Tel.: (732) 634-1500. Internet: http://www.middlesexwater.com.

L.Y.

October 26, 2007

TOTAL SHAREHOLDER RETURN

3 Mos.	6 Mos.	1 Yr.	3 Yrs.	5 Yrs.
-0.71%	4.66%	1.03%	16.31%	32.06%



Ano. of analysts changing earn. est. in last 13 days: 0 up, 0 down, consensus 5-year earnings growth 15.0% per year. Based upon 2 analysts' estimates. Cased upon 2 analysts' estimates.

	,	ANNUAL I	RATES			ASSETS (\$mill.)	2005	2006	6/30/07
of chan	ge (per s	share)	5 Yrs.	1	Yr.	Cash Assets	4.4	1.4	.2
Sales	J - 11	/		-2	2.5%	Receivables	5.9	9.5	11.5
"Cash F	Flow"		-0.5%	-6	3.0%	Inventory (Avg cost)	.9	.9	1.0
Earning			-2.5%		3.0%	Other	14.9	2.4	3.1
Dividen			1.0%		.0%	Current Assets	26.1	14.2	15.8
Book Va	alue		5.0%	C).5%	Ourient /103013	20.1	17.2	10.0
Fiscal	QUA	RTERLY	SALES (\$	mill.)	Full	Property, Plant			
Year	1Q	2Q	3Q	4Q	Year	& Equip, at cost	345.0	370.5	
						Accum Depreciation	97.3	102.4	
12/31/05	10.9	11.0	14.1	11.5	47.5	Net Property	247.7	268.1	272.5
12/31/06	10.5	11.4	13.3	11.7	46.9	Other	32.2	32.9	<u>34.5</u>
12/31/07	13.2	14.4				Total Assets	306.0	315.2	322.8
12/31/08									
Fiscal	ΕΛ	RNINGS	DED SHV	DE	Full	LIABILITIES (\$mill.)			
Year	1Q	2Q	3Q	4Q	Year	Accts Payable	4.8	6.0	7.0
Ital	102	24	JQ	+4		Debt Due	7.1	5.3	9.2
12/31/04	.24	.26	.47	.19	1.16	Other	1.3	1.7	1.7
12/31/05	.24	.15	.41	.08	.88	Current Liab	13.2	13.0	17.9
12/31/06	.21	.12	.45	.03	.81				
12/31/07	.18	.22	.40	.22					
12/31/08	.19					LONG-TERM DEBT A	ND EQUIT	Υ	
Cal-	QUAR	TERLY D	IVIDENDS	PAID	Full	as of 6/30/07			
endar	1Q	2Q	3Q	4Q	Year	Total Debt \$86.5 mill.		Due in 5	Yrs. NA
2004	.208	.208	.21	.21	.84	LT Debt \$77.3 mill.			
2005	.21	.21	.213	.213	.85	Including Cap. Lease	s NA		
2006	.213	.213	.215	.215	.86				of Cap'l)
2007	.215	.215	.218	.213	.00	Leases, Uncapitalized	i Annual re	entals NA	
2007	.213	.213	.210			Pension Liability None	in '06 vo	None in 'OE	
	INSTITUTIONAL DECISIONS					Felision Liability None	5 III 00 VS.	NOTIC III US	
		4Q'06	1Q'07	20	Q'07	Pfd Stock \$.8 mill.		Pfd Div'd	Paid NMF
to Buy		18	18		17	Common Stock 0 242 0	OC abaraa		
to Sell		12	11		12	Common Stock 8,312,8	uo snares	/EC0	% of Cap'l)
LIId'a/O	00)	1210	4.464	4-	747			(307	₀ ∪ı ∪apı)

1717

Hld's(000)

1318

1461

INDUSTRY: Water Utility

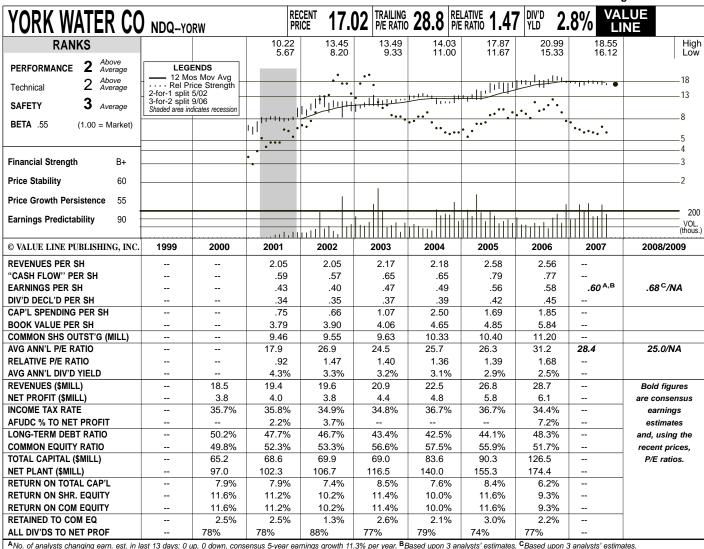
BUSINESS: Connecticut Water Service, Inc. primarily operates as a water utility company in Connecticut. It operates through three segments: Water Activities, Real Estate Transactions, and Services and Rentals. The Water Activities segment supplies public drinking water to its customers. The Real Estate Transactions segment involves in the sale of its limited excess real estate holdings. The Services and Rentals segment provides contracted services to water and wastewater utilities and other clients, as well as leases certain of its properties to third parties. This segment's services include contract operations of water and wastewater facilities; Linebacker, its service line protection plan for public drinking water customers; and provision of bulk deliveries of emergency drinking water to businesses and residences via tanker truck. As of December 31, 2006, Connecticut Water supplies water to 83,247 customers in 41 towns throughout Connecticut. Has about 200 employees. Chairman, C.E.O. & President: Eric W. Thornburg. Inc.: CT. Address: 93 West Main Street, Clinton, CT 06413. Tel.: (860) 669-8636. Internet: http://www.ctwater.com.

L.Y.

October 26, 2007

TOTAL SHAREHOLDER RETURN

3 Mos.	6 Mos.	1 Yr.	3 Yrs.	5 Yrs.
-3.49%	-1.41%	9.41%	-2.28%	7.29%



Ano. of analysts changing earn. est. in last 13 days: 0 up, 0 down, consensus 5-year earnings growth 11.3% per year. Based upon 3 analysts' estimates. Cased upon 3 analysts' estimates.

	A	NNUAL	RATES			ASSETS (\$mill.)	2005	2006	6/30/07
of chan	ge (per s	hare)	5 Yrs.	1	Yr.	Cash Assets	.0	.0	.0
Revenu			3.5%).5%	Receivables	3.8	4.8	5.4
"Cash F			4.5%		2.5%	Inventory (Avg cost)	.8	.8	.8
Earning			4.5%		3.5%	Other	5	1.1	.8
Dividen			-3.0%		'.0%	Current Assets	5.1	6.7	7.0
Book V	aiue		6.0%	20).5%				
Fiscal			SALES (\$r		Full	Property, Plant	182.4	202.7	
Year	1Q	2Q	3Q	4Q	Year	& Equip, at cost Accum Depreciation	27.1	202.7	
12/31/05	6.2	6.7	7.2	6.7	26.8	Net Property	155.3	20.3 174.4	181.2
12/31/06	6.6	7.0	7.7	7.4	28.7	Other	11.9	15.0	14.3
12/31/07	7.4	8.0	1.1	7.4	20.1	Total Assets	172.3	196.1	202.5
12/31/07	7.4	0.0				Total Assets	172.0	130.1	202.0
12/01/00						LIABILITIES (\$mill.)			
Fiscal			PER SHAI		Full	Accts Payable	2.6	1.6	3.5
Year	1Q	2Q	3Q	4Q	Year	Debt Due	19.3	1.2	3.8
12/31/04	.12	.11	.12	.14	.49	Other	2.8	3.1	2.9
12/31/05	.12	.14	.17	.13	.56	Current Liab	24.7	5.9	10.2
12/31/06	.12	.14	.17	.15	.58				
12/31/07	.12	.15	.19	.15					
12/31/08	.14					LONG-TERM DEBT A	ND EQUIT	Y	
Cal-	QUAR	TERLY D	IVIDENDS	PAID	Full	as of 6/30/07			
endar	1Q	2Q	3Q	4Q	Year	Total Debt \$64.9 mill.		Due in 5	5 Yrs. NA
2004	.097	.097	.097	.097	.39	LT Debt \$61.1 mill.	- NIA		
2005	.104	.104	.104	.104	.42	Including Cap. Lease	S NA	(100/	of Cap'l)
2006	.112	.112	.112	.112	.45	Leases, Uncapitalized	1 Annual re		o or Cap i)
2007	.118	.118	.118	.118	.47	Louses, Orloapitalized	a / williadi ic	inais ivit	
	INSTIT	UTIONA	L DECISIO	NS	1	Pension Liability \$5.9	mill. in '06	/s. \$3.9 mill	l. in '05
		4Q'06	1Q'07	20	Q'07	Pfd Stock None		Pfd Div'd I	Paid None
to Buy		13	13		14	Common Stock 44 222	700 aharaa		
to Sell		6	1		5	Common Stock 11,232,	700 snares	(520	% of Cap'l)
						I		(32)	o oi oapi)

Hld's(000)

1164

1222

1416

INDUSTRY: Water Utility

BUSINESS: The York Water Company engages in the impounding, purification, and distribution of water in York County and Adams County, Pennsylvania. It supplies water for residential, commercial, industrial, and other customers. The company has two reservoirs, Lake Williams and Lake Redman, which together hold approximately 2.2 billion gallons of water. It also has a 15-mile pipeline from the Susquehanna River to Lake Redman that provides access to an additional supply of water. The company serves 34 municipalities in York County and four municipalities in Adams County. In September, the company stated that Jeffrey S. Osman will retire as the water utility's president and chief executive effective March 1. Jeffrey R. Hines will take over as president and CEO upon Mr. Osman's retirement. Has 106 employees. C.E.O. & President: Jeffrey S. Osman. Inc.: PA. Address: 130 East Market Street, York, PA Tel.: 845-3601. (717)Internet: http://www.yorkwater.com.

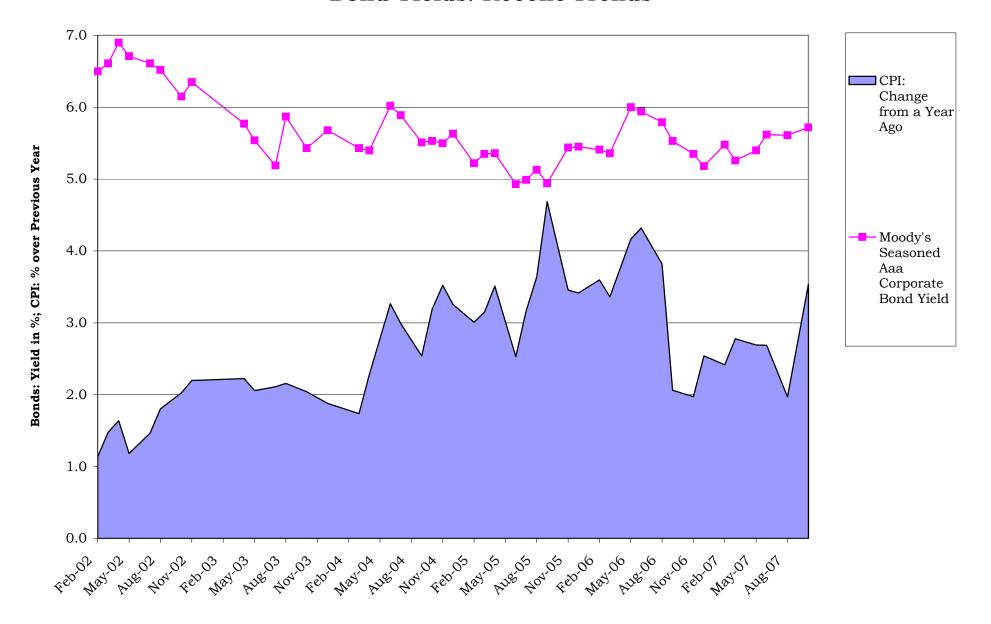
L.Y.

October 26, 2007

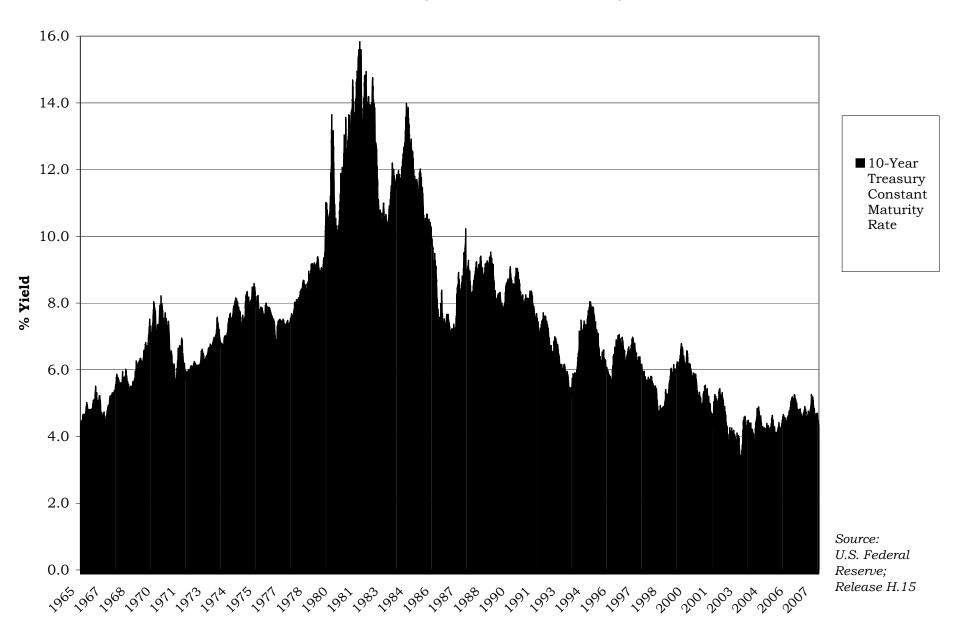
TOTAL SHAREHOLDER RETURN

3 Mos.	6 Mos.	1 Yr.	3 Yrs.	5 Yrs.
-4.46%	0.42%	-9.03%	58.00%	73.72%

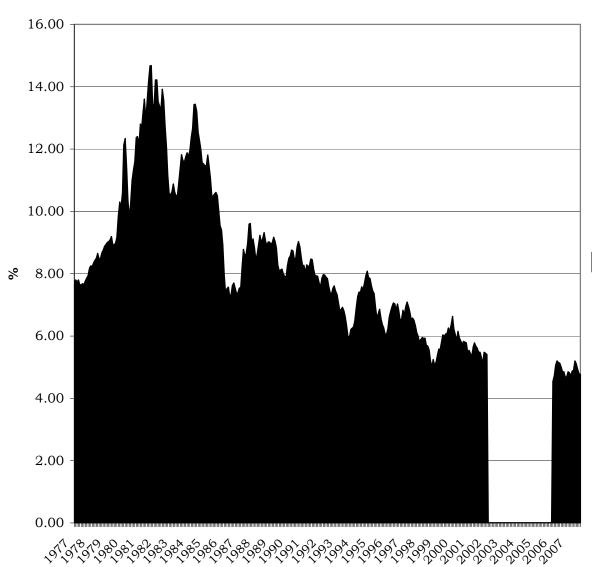
Inflation Versus AAA Corporate Bond Yields: Recent Trends



10-Year Treasury Constant Maturity Rate



30-Year Treasury Constant Maturity Rate



■ 30-Year Treasury Constant Maturity Rate

Yields on actively traded non-inflation-indexed issues adjusted to constant maturities. The 30-year Treasury constant maturity series was discontinued on February 18, 2002, and reintroduced on February 9, 2006.

Source: U.S. Federal Reserve System, release H.15